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ABSTRACT

This publication, extracted from a full study report, summarizes the development and utilization of an assessment model for the effectiveness of library and non-library network delivery of consumer information. Consumer information is defined as that needed by the general public to resolve problems within the family or household. The network assessment model is presented in 13 parts with 32 research questions covering: (1) the network's definition of consumer information; (2) types of consumer information provided; (3) availability of information services to consumers; (4) funding; (5) staffing; (6) degree of support from member libraries and administrations; (7) network services; (8) relationships to other networks; (9) network priority on consumer information services; (10) network activities; (11) the relative importance of five criteria in providing information--cost in money, cost in time, and information accuracy, currency, and understandability; (12) publicity and marketing; and (13) determination of user satisfaction. A typology of consumer information networks is presented, as well as a discussion of the selection of nine networks to test the assessment model. A brief description of model limitations precedes a reexamination of the model in light of case studies of the nine networks selected. A summary of network responses to each of the research questions in the assessment model is provided. (ESR)

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Extracted Report - Assessment Model

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CRITERIA OF EFFECTIVENESS FOR NETWORK DELIVERY OF CITIZENS INFORMATION THROUGH LIBRARIES

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I. ASSESSMENT MODEL*

As was noted in the RFP No. 80-76, public libraries have placed increasing emphasis upon the provision of information and referral services to citizens. These library based information and referral services have evolved from a desire to promote public access to consumer information and to provide a service with politically visible utility to a new constituency. To this increasing commitment for information and referral services has been added the concept that networking offers an improved information delivery system. While improved information services and networking rank high on any library's agenda, network effectiveness has been evaluated customarily on the basis of cost effectiveness and document delivery capabilities. This is because library networks, for the most part, were not developed specifically to meet consumer information needs. Most library networks have been initiated for resources sharing purposes. In other words, in the face of financial difficulties, networks have been formed to provide network information users access to maximum information sources at the lowest cost possible to individual network members. Yet, effectiveness covers other factors as well. With this in mind, this report presents an assessment model that can be used in examining library and other information networks that provide citizens with consumer information.

Figure 1 conceptualizes the assessment model, which examines the effectiveness of networks in meeting consumers' information needs. The purpose of this model is to identify considerations that may contribute to a network's success or failure in meeting consumer information needs. Once the various considerations were identified, they were tested operationally in an attempt to see if factors could be added, deleted, or refined.

DEFINITION OF CONSUMER INFORMATION

Consumer information is that information needed by the general public to resolve problems within the family or household. People seek the information to assist them with everyday problems including, among others, those related to money matters, health, housing, and energy. The emphasis is on situations where the person is not paid to gather the information. The following examples represent topics that fall outside this definition of consumer information:

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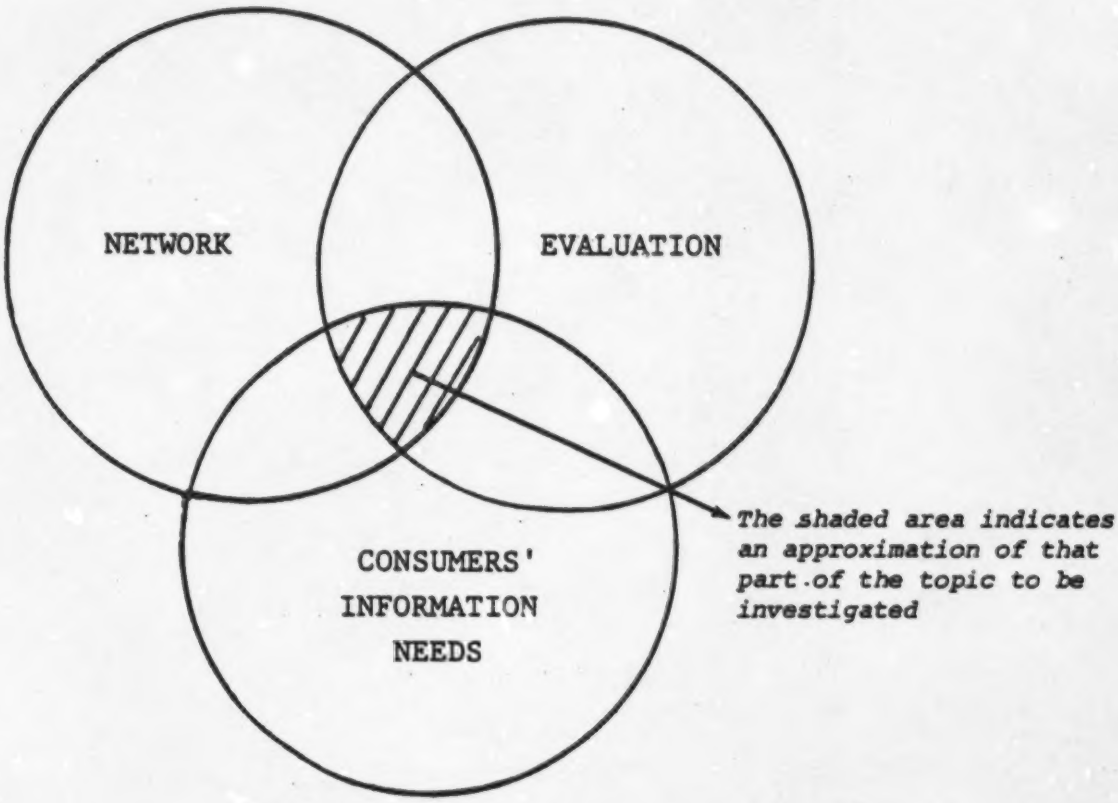
* Information contained in this publication has been extracted from both Chapters 2 and 5 of the Final Report of this project. This report mainly deals with the assessment model.

Figure 1. Effectiveness of Networks in Meeting Consumer Information Needs - A Conceptual Model for Research


NETWORK
EVALUATION
CONSUMERS' INFORMATION NEEDS
The shaded area indicates an approximation of that part of the topic to be investigated

- Student getting information for an academic purpose (e.g., term paper)
- Small businessmen wanting to know how to market their products or what their rights are in relationship to another firm
- People wanting to clarify their relationship with government agencies. Users of government services will not be regarded as consumers of that service (e.g., the person not receiving the social security check)
- Student wishing to sue the university for misuse of their records.

The study did uncover a variety of definitions of consumer information. It was found, during the course of conducting the telephone survey of library networks, that the respondents may not have paid careful attention to the definition of consumer information when it was offered during the

phone conversations. Perhaps they wanted to place their networks in the best light and to appear actively engaged in the provision of consumer information services.

As to the case studies of the nine selected networks (as specified in the RFP), the results are based upon interviews with members of these networks. During the interviews, network staff presented their opinions and experiences based upon their own memory and/or written documents. The researchers neither attempted to verify the accuracy of the responses nor to test the ability of each individual network to provide consumer information. The investigations were more interested in identifying factors for consideration in the development of the assessment model than in developing reliable and valid test criteria. It should be noted that some of the network staff members would have been less candid in their replies and comments if they believed that the researchers intended to go beyond the respondents' oral statements as well as those contained in the selected internal documents.

OVERVIEW

Table 1 depicts the areas for consideration in developing criteria of effectiveness of networks in meeting consumer information needs. The thirteen areas were derived from an analysis of the existing literature, extensive discussions at the Advisory Group meetings, the experiences of the Group members with present networks, as well as the findings of a previous study conducted by the researchers. (1)

A PHILOSOPHY OF SERVICE

Articulation of a philosophy of service potentially comprises an important area for consideration. This category encompassess the type and extent of services provided. For example, do libraries merely point patrons in the direction of relevant source material, while non-library networks are more likely to assist patrons in problem-solving, gaining access to the most recent and accurate information, and interpreting or enhancing the understandibility of the information found?

These examples suggest that service can be classified into

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1 Ching-chih Chen and Peter Hernon, Information Seeking: Assessing and Anticipating User Needs. New York: Neal-Schuman Publishers, 1982. See also Ching-chih Chen and Peter Hernon, A Regional Investigation of Citizens Information Needs in New England: Executive Summary Report and Final Report. (Research project supported by the Office of Libraries and Learning Technology, U.S. Department of Education, Project No. 475-AH-90031). Boston, MA: Graduate School of Library and Information Science, Simmons College, 1981.

Table 1. Areas of Consideration in Developing Criteria of Effectiveness of Information Networks in Meeting Consumer Information Needs

1. Definition of consumer information
2. Types of consumer information that networks are providing (clearly formulated goals and objectives)
3. Availability of information services to consumers. (Are the services available directly to users or to libraries?)
4. Sources and levels of current and forthcoming fundings
5. Staffing (number of staff, change in staffing, morale, role of activists, etc.)
6. Degree of support from member libraries and administration
7. Service (articulation of a philosophy of service, cost of service, involvement in referral practices, etc.)
8. Relationship to other networks
9. Priority of consumer information services among network activities. (Are they the only activities? What else does the network do? Is there a perceived need for the services? Does the library play an active role in the provision of such services?)
10. Activities engaged in
    - information acquisition and organization
    - information dissemination
    - information referral
    - document delivery
    - information interpretation/advice
    - consumer education
    - advocacy
    - lobbying
    - problem-solving
11. Relative importance of criteria in providing information:*
    - cost in money
    - cost in time
    - accuracy
    - up-to-dateness
    - understandibility
12. Publicity and marketing
13. Determination of user satisfaction (Implementation of formal evaluation component)

*While conducting the investigation into the information needs of New England residents (see Footnote #1), the information providers consulted, especially those labeled as most and least helpful, were examined, and the reasons for use and non-use of libraries were specifically probed. Generally speaking, accuracy of the response (27.9%) and understandibility of the information (23.6%) were regarded as the most important. Costs in money and time were third (18.9%) and fourth (17.1%) respectively. The up-to-dateness of information supplied was perceived by residents to be a minor consideration (6.6%). Often in situations, the distinctions between any two criteria can be blurred and subtle. Thus, it was decided that the five criteria would comprise one consideration in the assessment model.

three categories: conservative, moderate, or liberal. (2) In some instances, personnel might merely show users how to find answers for themselves. In other cases, they might point out which reference source might be useful but would only actively assist users when further assistance was requested. In these cases, referral service would definitely not be viewed as necessary or as an integral part of reference services. These examples illustrate conservative and moderate type of services. On the other hand, liberal service involves staff members consistently finding the answer or the sources from which the answer can be obtained. Personnel are both willing and eager to assist patrons, even if this involves drawing upon external resources. Presumably specialized networks devoted to one topical area most closely attempt to implement the liberal approach.

RESEARCH QUESTIONS

Table 1 displays the areas essential to the formulation of an assessment model. Each of these areas form the basis around which research questions can be raised. Some of these questions are listed in the following:

1. DEFINITION OF CONSUMER INFORMATION

   - Will the networks have articulated a clear definition?
   - Will the networks hold a similar definition of consumer information?

2. TYPES OF CONSUMER INFORMATION THAT NETWORKS ARE PROVIDING

   - Will the networks have articulated clearly defined goals and objectives acceptable to all member libraries?
   - Will the networks have "institutionalized" their consumer information programs?
   - Will the networks have implemented consumer information services on a selective basis?
   - Will the networks have developed services of great demand, which appeal to a broad audience?
   - Will the networks have determined target populations and actively work with them?

3. AVAILABILITY OF INFORMATION SERVICES TO CONSUMERS

   - Will the networks limit their services only to libraries?
   - Will the networks' services be available directly to users as well?

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2 For a more complete discussion of the categories, see James I. Wyer, Reference Work. (Chicago, IL: American Library Association, 1930) and Samuel Rothstein, "Reference service: The new dimension in librarians," College & Research Libraries 22: 11-18 (January 1961).

4. SOURCES AND LEVELS OF FUNDING

- Will the networks be dependent on funding, in particular from the Federal Government, for the initiation and continuation of consumer information services?
- Will the Networks be dependent on outside funding for their survival?

5. STAFFING

- Will the success of the networks be linked to the number of staff?
- Will the staff believe that they are performing a vital role?
- Will the networks currently be expanding the number of staff and services?
- Will the networks have no readily apparent problems related to staff morale?

6. DEGREE OF SUPPORT FROM MEMBER LIBRARIES AND ADMINISTRATIONS

- Will the networks have the full support (financial and other) from member libraries and their administrations to continue their consumer information services?

7. SERVICES

- Will the networks have articulated a philosophy of service?
- Will the networks provide consumer information services gratis?
- Will the networks perceive the provision of referral services as an essential aspect of their activities?
- Will the networks be able to provide personal and aggressive reference services?

8. RELATIONSHIP TO OTHER NETWORKS

- Will the networks have identified other networks providing consumer information services and attempted to work with these other networks?

9. NETWORKS' PRIORITY ON CONSUMER INFORMATION SERVICES

- Will the networks focus largely or exclusively on consumer information services?
- Will the networks have responded to perceived needs for consumer information services?
- Will the networks plan to expand their consumer information services over the next several years?
- Will the networks play an active role in the provision of consumer information services?

10. ACTIVITIES ENGAGED IN

- Will the networks be actively engaged in information interpretation and advice?
- Will the networks be in agreement concerning the activities which libraries should engage in?
- Will the networks view information interpretation/advice and problem-solving as crucial areas for libraries to develop their consumer information services?

11. RELATIVE IMPORTANCE OF CRITERIA IN PROVIDING INFORMATION

- Will the networks be in agreement concerning the relative importance of the five criteria?

12. PUBLICITY AND MARKETING

- Will the networks exploit a variety of publicity techniques?

13. DETERMINATION OF USER SATISFACTION

- Will the networks have undertaken a formal needs assessment and have gathered data on user satisfaction?
- Will the networks be in agreement concerning the methods for determing user satisfaction?

TYPOLOGY OF NETWORKS

There are many lists of networks. One such list identifies local, cooperative, and Federal Government networks. (3) Although not comprehensive, the listing, does suggest that service functions can be examined and that networks can be classified such as by: 1) public library consortia, 2) State agencies, 3) more than one type of library, 4) types of resources that they provide (e.g., government publications), and 5) diverse subject areas. (See Figure 2).

With this list as well as other available lists of library networks, the researchers decided to make heavy utilization of the Directory of Library Networks & Cooperative Library Organizations. (4) This Directory is both current and extensive. It provides sufficient information on each library network, which

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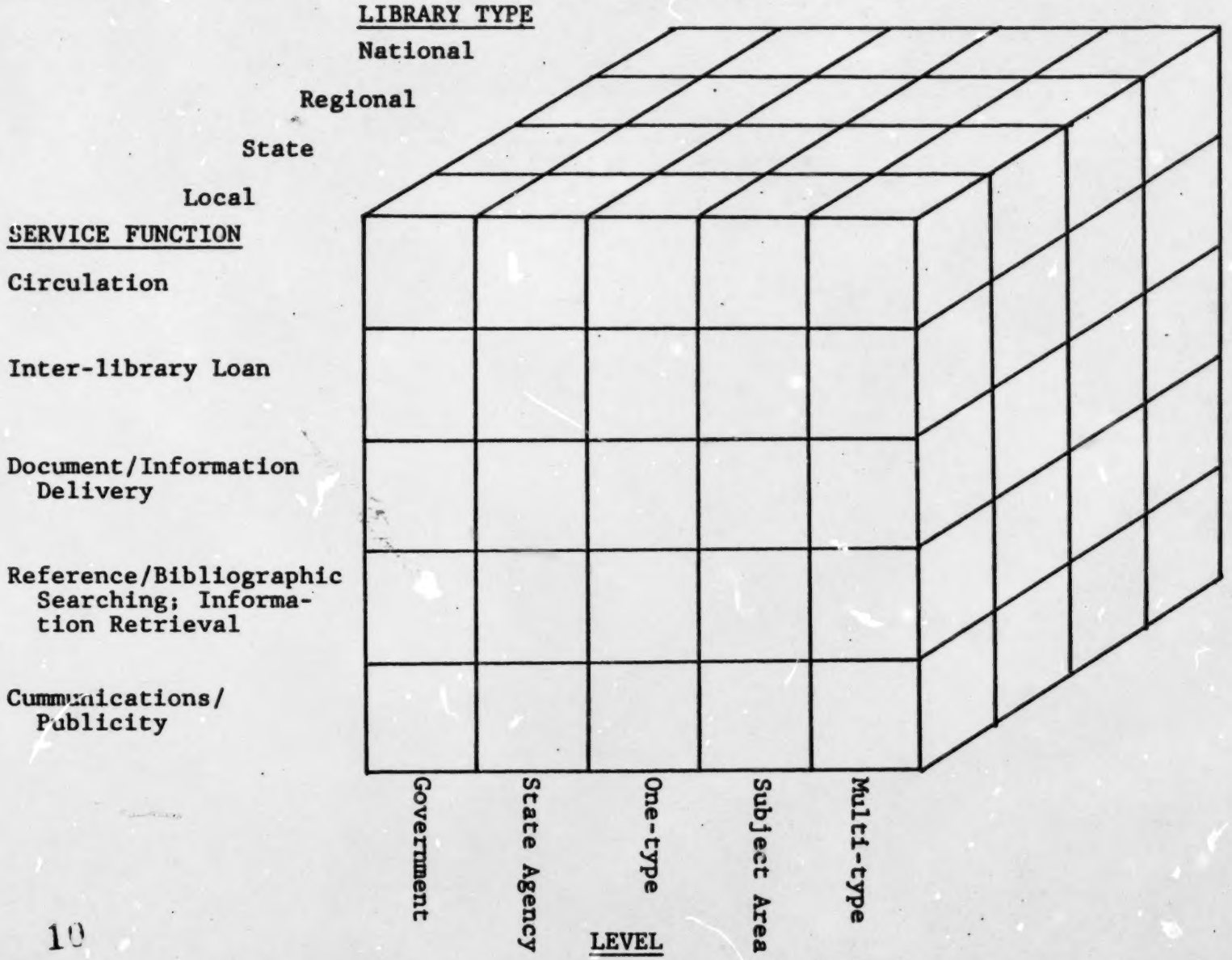
[3] Brenda White, "Cooperatives and networks," in Networks for Networkers, edited by Barbara E. Markuson and Blanche Woolls. New York: Neal-Schuman Publishers, 1980. pp. 320-334, 345-368.

[4] U.S. Department of Education. National Center for Education Statistics. Directory of Library Networks & Cooperative Library Organizations. Washington, DC: Government Printing Office, 1980.

Figure 2. Examples of Networks Grouped by Service Function, Library Type, and Level



will enable the researchers to classify the library networks by service function if necessary. Furthermore, with the background information available in this source, the researchers can reduce sharply the required time necessary to gather the data on library networks.

Since the total number of library networks providing consumer information services had not been previously documented, it was decided, in consultation with the Advisory Group, that the researchers first identify, from the 620 library networks, as listed in the above mentioned directory, the number of existing library networks actually providing consumer information services. Once the number had been identified, then the researchers could categorize the networks by type. Thus, a survey of the existing library networks had to be undertaken as a preliminary step to this contracted project (see Chapter 3 for more detailed discussion). Only after completing this survey, could the typology of library networks relevant to this project be determined.

In addition to library networks, it is also essential to include non-library networks in this study, since many networks of this nature are actively involved in very exciting activities in providing consumer information services. Thus, it is necessary as well to elaborate on the typology of non-library networks as another preliminary step prior to the beginning of this project. This categorization was completed on the basis of the information gathered from the literature search as well as consultation with such people as Mr. Joseph McDonough of the Advisory Group and Mr. Henry Drennan, then the Project Officer for the Office of Libraries and Learning Technology, U.S. Department of Education.

Once the typology of both library and non-library networks has been clearly defined, the nine networks, called for in the RFP, can then be selected. These nine selected networks represent different types, involvements with consumer information, and degrees of sophistication. These networks are as follows:

LIBRARY NETWORKS

- Community Health Information Network (CHIN) & the Watertown Free Public Library
- The Nassau Library System
- OCLC/CHANNEL 2000 & the Public Library of Columbus and Franklin County
- The Free Library of Philadelphia
- The Regional Energy/Environment Center, Denver Public Library

NON-LIBRARY NETWORKS

- Better Business Bureau of Western Massachusetts
- Consumer Education Resource Network (CERN)

- Massachusetts Executive Office of Consumer Affairs
- Middlesex County Extension Service

The process of selection and the criteria used for the selection of these nine networks are elaborated in the Final Report.

METHODOLOGY

After having formulated the areas for possible inclusion in the assessment model, and having identified the range of pertinent library and non-library networks, the researchers selected the stipulated nine networks in order to accomplish the following purposes:

- to verify that the tentative areas displayed in Table 1 seem to be reasonable
- to gather data on the research questions listed earlier
- to determine if other areas could be added to the assessment model.

An Interview Guide was developed to gather data in order to examine the research questions in the contexts of the nine selected networks. A complete copy of this Guide is included in the Final Report. The Guide consists of the following sections:

- the organizational structure of the network
- network goals and objectives
- goals for the consumer information services
- the consumer information services currently provided and those in the planning stage (e.g., target audience and how and why the services began)
- relationship to other networks
- fund allocation
- staffing
- network activities
- publicity of consumer services
- types of sources used in providing consumer information services
- the five criteria in providing consumer information services (e.g., cost in money and time)
- information transfer and new technology
- clientele and needs assessment
- user satisfaction
- future role of libraries in providing consumer information services
- background information on the network.

LIMITATIONS OF THE ASSESSMENT MODEL

The Interview Guide was intended to provide an overview of each of the nine selected networks and its consumer information services. It cannot be regarded as an instrument for a precise evaluation of a network's effectiveness. Some items in the

Interview Guide may not be appropriate in a particular case. Variations as to each network's target audiences, definition of consumer information services, etc., all inhibit generalization and affect the precision of developing a comprehensive assessment model. For example, answers to questions pertaining to the current financial situation faced by a network may reflect uncertainty due to the present funding situation under the Reagan Administration or Proposition 2-1/2 in Massachusetts or 13 in California.

The assessment model cannot really deal with the cost-benefit impact of single libraries (members of a network) directly on citizens or measure such benefits on the networks themselves. Networks do not always benefit citizens directly; they may benefit libraries which in turn benefit users. One would have to separate the activities that a member library engages in that do not depend on the network from those activities that are dependent on the network. This separation of activities would have to be performed on formal library networks as opposed to the informal information and referral (I&R) networks of libraries and social service agencies. Such research, however, is beyond the scope of this present exploratory study.

It should be remembered that the study only examines consumer information services provided in a network context rather than focusing on the range of services that individual libraries may provide as part of their own information and referral services. Perhaps many libraries find that they can meet the consumer information needs of their clientele without resorting to networking. The testing of such an assumption is beyond the scope of this study. Yet, the study does seem to show that in certain contexts, networking is beneficial for meeting consumer information needs.

Furthermore, library and non-library networks operate with widely divergent definitions of consumer information. In order to approach the telephone and on-site interviewing in a consistent manner, the definition of consumer information, noted earlier in this chapter, was provided. However, the problem of a lack of consensus concerning a definition still exists.

Finally, there are limitations to the study in terms of the selection of only nine networks for in-depth study. The project had to resort to individual case studies, which did not permit a precise determination of effectiveness or statistical comparison.

II. ANALYSIS OF ASSESSMENT MODEL

Before discussing the research questions, it might be beneficial to make several observations based upon the on-site interviewing. First, the consumer information services operate within a specialized context. The networks must typically select specific areas in which to develop their services. They do not attempt to be "all things to all people;" instead, they select those areas in which they believe that they can be most effective given funding, staffing, etc. Second, depending upon the scope and extent of the services provided, consumer information services can be expensive to operate. They may require Federal funding or other outside support; such support may be necessary for not only the initiation of the services but also their continuing operation. Clearly, outside funding or "soft" money has played an important role in the development of consumer information services. One criterion for success will relate to the degree to which networks can get their member libraries to absorb the costs of the services once the outside money has ceased. Both Project CHIN and the Nassau Library System have been successful in this regard. Member libraries realize the value of the consumer information services currently offered and are willing to provide financial and staff support to the best of their ability.

Further research might profitably probe the costs associated with the operation of specific consumer services. Undoubtedly the Regional Energy/Environment Center and CERN are more expensive to operate than are the consumer related services provided by the Nassau Library System and the CHIN. One criterion for judging the success of a consumer related network may be related to the ability of the networks to survive once the initial funding has ceased. The viability of some networks may be evident from the efforts to seek and find other sources of funding. Apparently an overriding goal for networks dependent solely upon the provision of specialized consumer information services (e.g., the Regional Energy/Environment Center and CERN) may become self-preservation.

Third, the value of consumer information services provided in a network context can be questioned. Obviously, many of the staff members interviewed believed that the services were essential if public libraries are to meet basic information needs of their constituents. If the libraries do not provide such services, other institutional providers might. Yet, library administrations may not view consumer services with the same priority. It may be that some libraries can provide consumer services without engaging in networking. When they do resort to networking, it can be of varying degrees of sophistication, ranging from traditional interlibrary loan to the establishment of referral centers and a Regional Energy/Environment Center.

Perhaps many libraries believe that they can meet most of their clients' consumer information needs without resorting to formal networking involving the application of new technology. Interestingly, most of the networks studied did not make use of new technology to meet consumer information needs, except by conducting online searches of bibliographic databases; such services often involved user fees.

Consumer information needs must be placed in the context of library goals and objectives, and therefore compete with other types of information needs, some of which may be perceived as more important. Consumer information networks clearly see the need to link consumers to the appropriate information providers and increase dialogue among information providers so that the referral process can be improved. The process of linking could be enhanced by new technology; however, those interviewed often viewed technology as theoretically beneficial. Practically, they questioned whether the necessary funds were available and whether libraries would employ technology solely for meeting consumer information needs. Instead, it was more likely that libraries would employ technology to meet a wide diversity of needs, including those pertaining to consumer information.

Libraries are installing microcomputers for public use, creating programming to cable television and storing documents on videodiscs. They are also serving as electronic information centers linking government agencies, colleges and universities, community groups and citizens. In addition, libraries are beaming signals to satellites and tracking down delinquent borrowers with electronic vigilance. As consumers begin to develop their own home information centers with cable or computers, they can query libraries and obtain information on their television screens.

Some libraries are installing coin-operated microcomputers whereby their users can select from among computer programs such as drawing up household budgets. Other libraries may use cable channels to distribute community information and may have installed computer-assisted vocational services, which describe the availability of jobs in the local area. At the Pike's Peak Library District, Colorado Springs, for example, computer terminals in branch libraries provide access to community information - course offerings of area colleges, consumer information, train schedules, day-care information, and information about local car pools. Community residents with their own microcomputers can use public telephone lines to tap into the community information network. Against this background, it might be suggested that

> "information retrieval is expected to be the top home and business use of teletext systems through the end of the century, but that transaction services such as banking and ticketing will replace information retrieval

> as the most popular application for two-way videotext in the home by the year 2000. Information retrieval will remain the top videotext application for the business community." (5)

As this brief discussion has indicated, public libraries are beginning to use new technology to meet public service objectives. By so doing, they are addressing the information needs of local residents. It may be that many of these libraries need not engage in networking with other libraries. However, they can develop their networking capability with other information providers and thereby better serve community information needs. The major questions then become, to what extent do libraries develop their networking capabilities, their ability to meet consumer information needs, and their capability to apply new technology?

RESEARCH QUESTIONS

DEFINITION OF CONSUMER INFORMATION

Will the networks have articulated a clear definition?

The networks have determined which areas under the broad rubic of consumer information that they want to address. In the case of the Nassau Library System, the network staff in cooperation with member libraries have articulated the areas that would receive priority attention. Member libraries such as the Plainedge Public Library might develop services which are then marketed to the entire network.

Will the networks hold a similar definition of consumer information?

As has already been explained, the answer is in the negative; widely divergent definitions were encountered. Table 2, which focuses on these definitions, shows that some networks equate consumer information with community services, while others adopt more restrictive definitions - health information, consumer education, or consumer rights. The network situated in the Denver Public Library, for example, limits itself to energy/environment information.

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[1] "NSF Study: Videotext may change your life," Library Daily July 10, 1982. p. 11.

Table 2. Selected Definitions of Consumer Information From Some Networks Interviewed

Network	Definition
Better Business Bureau of Western Massachusetts	Consumer information and education focuses on truth in advertising, promoting public confidence in business, and business self-regulation through voluntary cooperation. It focuses on consumer complaints and inquiries and seeks to protect the public from fraudulent and deceptive trade practices.
Consumer Education Resource Network (CERN)	Consumer education is "education about what the marketplace is, how to function in it, and how to affect change in it."
Community Health Information Network (CHIN)	Consumer information is defined in terms health information: "materials for both health care providers and consumers, in print and other formats (audio tapes, videotapes, films, etc.), which deal with maintenance, preservation, and restoration of physical, mental, or emotional well-being, including those items dealing with personal and public health, disease, medicine, therapeutics, surgery and other branches of specialized medicine."
Massachusetts Executive Office of Consumer Affairs	Consumer information is defined in terms of consumer rights, e.g., the handling of consumer complaints.
Middlesex County Extension Service	People can improve their lives if information resulting from research is made available through publications, local media, workshops, programs, or individual consultations. The focus is on consumer education.
Nassau Library System & The Free Library of Philadelphia	Consumer information is equated with community services.

TYPES OF CONSUMER INFORMATION THAT NETWORKS ARE PROVIDING

Will the networks have articulated clearly defined goals and objectives acceptable to all member institutions?

The formulation of goals and objectvies may have resulted from a desire to seek Federal funding. With the withdrawal of outside funding, the precise goals might have become clouded. Still, staff members had identified the directions that they wanted to pursue.

There are substantial variations among target audiences and their geographical bases - local, regional, and national. The broader the geographical dispersion the more difficult it becomes to work with the target audiences and to inform them fully of the extent and type of network services. In the case of the Consumer Education Resource Network (CERN), the target audience is most likely aware of the network's dissemination of information role. Awareness of the full range of services provided varies substantially among the seven target groups and whether training programs have been developed for a particular target group.

Member libraries may be more aware of the network than are the users. However, this should come as no surprise. Networks such as the Free Library of Philadelphia and the Nassau Library System are oriented toward serving the needs of member and branch libraries. Citizens deal with libraries rather than the network per se.

Will the networks have "institutionalized" their consumer information programs

The answer to this question would be "to varying degree of success." Given the present funding situation, they may be consolidating programs and gaining acceptance from member libraries that have experimental programs. Those programs which could be regarded as successful should be on-going and not dependent up "soft" money. In the case of the Regional Energy/ Evironment Center and CERN, the networks are fighting for their very survival. This illustrates that even those information consumer networks that are "successful" (well publicized and meet numerous information requests) are not well institutionalized. Support for their continued survival is not automatic; consumer information services may not be viewed by library administrations and funding sources as having as high a priority as some other service areas. The Project CHIN is perhaps the major exception to this generalization. Member libraries view their commitment to CHIN as solid; in spite of financial retrenchment, these libraries are attempting to maintain support for the network to the best of their ability. Nonetheless, even this network must depend, to a certain degree, upon outside funding; in this case, the funding is currently coming from the private sector.

Will the networks have implemented consumer information services on a selective basis?

As already indicated with the research questions relating to the definition of consumer information, the networks concern themselves with aspects of consumer information and not the full dimensions of this subject. Even the networks defining consumer information in terms of community service have initiated those programs with which they believe they can be most effective given their present staff, funding, and resource allocations. For example, the Community Services Department of the Free Library of Philadelphia has responsibilities beyond those consumer information services which it provides. The department is engaged in a variety of activities, including a film and speaking program. There are no plans to expand the consumer information services beyond the present level. The library must look at its commitment to these services in relationship to the present number of staff and the amount of the budget available. Still, it does not want to cerminate the present services, but to meet the needs of the community and the library system the best it can.

Will the networks have developed services of great demand, which appeal to a broad audience?

As shown in Table 3, each network has identified the target audiences to which it wants to appeal and is working within stated goals and objectives. It should be emphasized, however, that attempts to appeal to a broad audience are conditioned by factors relating to the extent of available funding and staffing. The Massachusetts Executive Office of Consumer Affairs, for example, has a small budget and a small number of staff. Nonetheless, the staff tries to work with agencies and organization that can widely disseminate information about consumer rights. With staff cuts and the present budgetary situation, this Office may not be able to maintain its present level of services. It may have to start charging for services previously provided free and to concentrate on the most financially viable programs.

Will the networks have determined target populations and actively work with them?

The previous research questions, as well as Table 3, show that the networks have determined target audiences and do work with them to the extent that both staffing and financial resources permit.

AVAILABILITY OF INFORMATION SERVICES TO CONSUMERS

Will the networks limit their services only to libraries?
Will the networks' services available directly to users as well?

The answers to these questions vary greatly. For example, the Nassau Library System and the Free Library of Philadelphia,

Table 3. Networks' Target Groups

Network	Target Groups
LIBRARY NETWORKS	
Community Health Information Network	The public libraries and residents of six towns in Massachusetts needing health related information
The Free Library of Philadelphia	Branch public libraries
The Nassau Library System	Member public libraries and residents in the communities
OCLC/CHANNEL 2000	200 test households in Columbus, OH
Regional Energy/ Environment Information Center, Denver Public Library	Residents of the ten-state Rocky Mountain region
NON-LIBRARY NETWORKS	
Better Business Bureau of Western Massachusetts	Consumer education and rights - protect business and consumers from unethical business practices
Consumer Education Resource Network	Consumer educators; a listing of the specific seven target groups is given in the report on the network in in the Final Report
Massachusetts Executive Office of Consumer Affairs	Consumers within the state (the agency promotes consumer education and informs businesses of their responsibilities to consumers)
Middlesex County Extension Service	Residents of the county/state. Each of the major programs targets different audiences.

as viewed in the context of this report, deal exclusively with member libraries in the system. These member libraries, in turn, deal with the users directly. Consequently, end users may be not aware that their information needs have been addressed through networking. CHANNEL 2000 involved an experimental project in which selected households had access to information; it does represent direct interaction between users and a public

library. Project CHIN is a cooperative effort between a community hospital and six nearby public libraries. Users, however, may come into direct contact with the network (but may be unaware that networking is involved) when a public library must refer to the collections of another member library or the hospital. The staff from one of the public libraries might refer users to the hospital for services, such as online searching of the MEDLINE database. The Regional Energy/Environment Center links inform-tion providers but users do have direct access to networking capabilities through the staff of the Center.

SOURCES AND LEVELS OF FUNDING

Will the networks be dependent on funding, in particular from the Federal Government, for the initiation and continuation of consumer information services?

Federal funding has played a critical role in the provision of consumer information services by the following five networks interviewed:

- Community Health Information Network
- Consumer Education Resource Network
- The Free Library of Philadelphia
- The Nassau Library System
- Regional Energy/Environment Center

Federal funding was necessary either to start the network or to establish certain services. The withdrawal of Federal funding has imposed a great hardship, one from which some the networks may not be able to recover. At any rate, all networks have attempted to explore alternative sources of funding.

The CHANNEL 2000 was mainly supported by OCLC, with approximately one-fifth of its $500,000 funded by the BANK ONE of Columbus, OH. Two of the other networks, the Massachusetts Executive Office of Consumer Affairs and the Middlesex County Extension Service, are parts of State governement and therefore rely on governmental budgeting processes for their funding. Finally, the Better Business Bureau is a private, non-profit organization supported by private business. For example, the Better Business Bureau of Western Massachusetts is financed by membership dues and subscriptions paid by businesses and professional firms in the community.

Will the networks be dependent on outside funding for their survival?

At this time, only three of the networks depend largely upon outside funding. Both the Regional Energy/Environment Center and Project CHIN are seeking support from the private sector. The Denver Public Library is currently exploring the possibility of joining with the private sector in a joint venture to market the services of the Conservation Library and to make it self-supporting. The intention is to produce a fee-based information

service operated out of a public library, with funding from the private sector.

Project CHIN receives support from member libraries, in the form of collection development and assigning staff to provide basic services, as well as from the hospital. The salary of the Director of the network is paid by the hospital and an investment corporation.

On the other hand, CERN is entirely dependent on Federal grants. The contract with the U.S. Office of Consumers' Education ends in March 1983. At that time, outside support must be available or the network terminates. CERN has developed a marketing plan by which it hopes to attract outside funding. It wants to find a "safe house" in the Federal Government or, as an alternative, full support from a business, foundation, university, or educational association. Staff members at CERN have already opened discussions with these various target groups, in an effort to gain support and guidance on the most appropriate location for the network. Since the interview, the researchers have learned of the resignations of CERN's several key staff. This can be taken as a signal for CERN's inability to come up with viable financial alternatives at this difficult time.

STAFFING

Will the success of the networks be linked to the number of staff employed?
Will the staff believe that they are performing a vital role?

On the basis of the on-site interviews, success cannot be equated to the number of staff members employed. In many cases, the number of staff members in most of the networks interviewed is exceedingly small. The Regional Energy/Environment Center, for example, is currently staffed by two full-time librarians and one part-time staff member. The staff firmly believe in the goals and objectives of the network and wish that other libraries would become more actively involved with the provision of consumer information services.

The number of staff, combined with available funding, do have a significant impact upon the services that some the networks would like to provide. One staff member from the Middlesex County Extension Service, for example, suggested that "there is no end of the services that I could think of, if there were only the money." He also noted that the office was facing the possibility of severe staff cuts, which in turn was affecting the morale of the staff.

Will the networks currently be expanding the number of staff and services?

The networks generally are not expanding the number of staff

and services. If anything, they are consolidating positions and service programs. They are less willing to experiment with new services and want to "institutionalize" consumer services so that member libraries will be less willing to terminate them. They want the consumer services to be regarded as a priority activity of the network and central to the goals and objectives of the organization. As noted in the Final Report, some of the networks may not be totally successful in this regard.

Will the networks have no readily apparent problems related to staff morale?

In those cases where there is uncertainly about the future of the network or where the number of staff members is being severely cut, morale problems are present. The staff members interviewed, however, were found to be deeply committed to their work and their philosophy of service, and demonstrated a sincere excitment about their activities. They were trying to keep budgetary problems from affecting their relationship with users of the network, and wanted to think that the difficulties would be resolved.

DEGREE OF SUPPORT FROM MEMBER LIBRARIES AND ADMINISTRATIONS

Will the networks, in these times of financial retrenchment, have the full support (financial and other) from members libraries and their administrators to continue their consumer information services?

Financial retrenchment has affected the number and type of services offered by many of the networks examined. The member libraries may want to continue their support but as in the case of Project CHIN, financial retrenchment may affect the ability of some of the member libraries to participate. The interviewing did not examine the consumer information services in relationship to the full range of services and activities provided by the library networks. Consequently, the full impact of the support from the library administration cannot be determined. For example, the Regional Energy/Environment Center is operated by the Conservation Library. The interviewing focused on the Center rather than on the Conservation Library and the Denver Public Library per se.

Some of the networks are dependent upon outside funding and the library itself may be unwilling to absorb all the costs or it may prefer to carry out the consumer information services on a much smaller scale. Such examples question the extent to which some administrators want to support consumer information services. However, this point can be overstressed; after all, the interviews were typically not conducted with library administrators. Their viewpoints therefore were provided through the interview subjects.

SERVICES

Will the networks have articulated a philosophy of service?

The networks have developed a philosophy of service consistent with their stated goals and objectives. Some of the networks, however, provide more extensive service than others. For example, they may be involved in the interpretation of information and advocacy, or their network staff may be able to expand their commitment to referral practices and to view referral as in integral part of a philosophy of service by having access to WATS line subsidized long-distance telephone calls. Perhaps the philosophy of CERN is the most outstanding one. The staff members there identify relevant source materials and engage in referral practices; they also verify the accuracy and up-to-dateness of printed information before they disseminate it to their clientele.

It would seem that the number of staff and the budgeting situation impact upon the philosophy of service of a network. Some of the networks interviewed would like to provide even more services and to more fully meet the information needs of their clientele, if sufficient staff and funding resources were available. Most revealing in this regard are the comments of those interviewed concerning the role of new technology and network plans over the next several years. Clearly some networks are consolidating consumer services, questioning their ability to implement new services, and attempting to encourage other information providers to join with them so that consumers can make use of a greater range and depth of services. These networks must be conscious of costs and the degree to which their target audiences will pay for services. Presently, the Regional Energy/Environment Center is considering charging the private sector for some of the services performed. More networks may feel compelled to avail themselves of this alternative and to charge a fee to certain segments of the library's clientele for the use of some of their services. The initiation of fee-based services would push more networks into the adoption of a more liberal philosophy of service - the supplying of requested information in an easily digested and repackaged form and the initiation of referral practices on behalf of users. The purpose would be to assist clientele in gaining access to needed information regardless of whether that information was available within or outside the particular network.

Will the networks provide consumer information services gratis?

In most case, the answers would be in the affirmative. The major exceptions would be for conducting online searches of bibliographic databases and for soil testing conducted by the Middlesex County Extension Service. As was previously noted, the Regional Energy/Environment Center may consider the initiation of a fee-based service with support from the private sector. If the present ability of networks to provide consumer information services decreases, more consumers may have to pay for essential

services. There may be no alternative if the service is to remain; a fee assessment would show how essential consumers view the information service, since they are willing to pay for such a service at this time of financial retrenchment.

Will the networks perceive the provision of referral services as an essential aspect of their activities?

All of the networks interviewed appear to be actively engaged in referral practices. The availability of subsidized telephone lines encourages referral. For example, CERN views referral as the ability to obtain additional information and to verify the accuracy and currentness of information available in printed form.

Will the networks be able to provide personal and aggressive reference services?

Networks such as the Regional Energy/Environment Center used Federal funding to subsidize referral practices and the making of long distance telephone calls on behalf of its clientele. Further, clientele outside the Denver County can call the Center on a toll-free line. However, staff budget cuts, as well as withdrawal of the subsidized telephone lines, are making an impact on the provision of personal and aggressive reference services. In the case of the Middlesex County Extension Service, the farm clientele of the network are currently turning to other information providers since staff of the Middlesex County Extension Service are less able to visit their clientele throughout the County and to provide diagnostic information to farmers from in-person visits.

RELATIONSHIP TO OTHER NETWORKS

Will the networks have identified other networks providing consumer information services and attempted to work with these other networks?

To varying degrees, the networks have identified other networks providing consumer information services and are attempting to work with them. As a generalization, non-library networks are more extensively involved in the identification of other networks. However, non-library networks are more likely to specialize in consumer information services. Further, library networks may believe that they can meet the information requirements of their clientele without having to resort to working with a variety of other networks. It should be emphasized, however, that staff from library networks may work closely with community groups but not specifically with other formal networks on a regular basis.

NETWORKS' PRIORITY ON CONSUMER INFORMATION SERVICES

Will the networks focus largely or exclusively on consumer information services?

Library networks, as has already been indicated, view consumer information services as but one of their responsibilities. It is not uncommon for these networks to define consumer information in terms of community services. This definition goes well beyond the definition of consumer services to which many non-library networks adhere. Further, libraries may not always see the need to develop or join networks for the provision of consumer information. Community files and other service programs may fulfill their definition of consumer information services. Perhaps networking for other areas is more cost/beneficial.

Will the networks have responded to perceived needs for consumer information services?

The networks saw a need for consumer information services and realized that other networks were not effectively filling the void. In the case of governement supported networks, there is a perceived responsibility for protecting and educating consumers. Interestingly, networks may respond to perceived needs in various ways. For example, the Free Library of Philadelphia, which responds to the needs of branch libraries, produces bibliographies and other aids that may be of value to branch libraries and their clientele. Project CHIN was created because public libraries wanted to improve their access to health information and because the Mount Auburn Hospital wanted community residents to associate the hospital with their health care. CERN materialized because the Federal Government and consumer educators saw a need for a clearinghouse of consumer resources. Apparently neither group perceived libraries as filling the role; consumer educators, it was believed, had important information needs that went unmet. CERN has been able to demonstrate, since its initiation, its importance as an effective and efficient information provider. However, it is worth noting that CERN refers clients to libraries but finds infrequent instances of referral from librarians to CERN for its services.

Will the networks plan to expand their consumer information services over the next several years?

Without exception, the answer is in the negative. They lack both the human and financial resources to expand such services. Further, governmental funding agencies no longer view consumer information with the same priority that they did several years ago. Most of the networks may be fighting for their very survival and realize that this is not the time for an expansion of services.

Will the networks play an active role in the provision of consumer information services?

There was substantial variation concerning the type of role that the networks played. The Free Library of Philadelphia was the most traditional among the nine interviewed, while CHANNEL

2000 represents an experimental project involving new technology and is therefore difficult to categorize. The Better Business Bureau of Western Massachusetts, the Massachusetts Executive Office of Consumer Affairs, and the Middlesex County Extension Service have established programs, ones which take the various staffs beyond the role of information acquisition and dissemination.

Reference viewed in terms of an "active role" can relate to the type and extent of services offered. The reports for the Regional Energy/ Environment Center, CERN, the Nassau Library System, and Project CHIN have identified diverse and innovative services. These services reflect networks actively engaged in meeting their clients' information requirements on a regular basis. There is a response to perceived needs and a realization that with planning and regular consultation between network headquarters and members, the members will continue to support various services. Networks might even expand to serve new constituents and develop service programs to meet specialized needs. For example, the Regional Energy/Environment Center has developed a contractual relationship to supply a State agency with services it cannot perform and which are not performed elsewhere. However, internal problems faced by the Center, as well as the budget cutting environment in which government currently operates, will limit the ability of the Center to renegotiate a similar contract in the future.

ACTIVITIES ENGAGED IN

Will the networks be actively engaged in information interpretation and advice?

Few of the networks studied viewed information interpretation and advice as part of their responsibilities (see Table 4). This activity generally rated a four or five on a five-point scale, where five was the lowest priority. Both CHANNEL 2000 and the Nassau Library System identified this activity as high priority (rated "1"); however, the Public Library of Columbus & Franklin County rated information interpretation and advice as a four. Only two non-library networks, the Colorado Energy Extension Service (which has a contractual relationship with the Regional Energy/Environment Center) and the Middlesex County Extension Service, rated this activity as an one. This demonstrates the sharp difference between library and non-library networks.

Will the networks be in agreement concerning the activities which libraries should engaged in?

All the networks agreed that libraries should be engaged in information dissemination and referral. With the exception of the Better Business Bureau of Western Massachusetts, the networks also agreed that information acquisition and organization were priority activities. Next, but of less importance, were document

Table 4. The Importance of Various Activities to Specific Networks*

Network Name	Information Acquisition & Organization	Information Dissemination	Information Referral	Document Delivery	Information Interpretation & Adice	Consumer Education	Advocacy	Lobbying	Problem-Solving
Community Health Information Network (CHIN)	1	1	1	2	4	2	1	2	3
- Watertown Free Public Library	1	1	1	2	4	3	5	3	5
The Free Library of Philadelphia	1	1	1	1	5	1	5	5	5
The Nassau Library System	1	1	1	1	1	1	3	3	1
OCLC/CHANNEL 2000	1	1	1	1	1	1	5	5	1
- The Public Library of Columbus & Franklin County (PLCFC)	1	1	1	1	4	3	4	5	[illegible]
The Regional Energy/Environment Center, Denver Public Library	1	1	1	2	5	3	5	1	2
- State Energy Extension Service	4	1	4	1	1	2	5	4	1
Better Business Bureau of Western Massachusetts	-	1	1	-	-	2	-	-	1
Consumer Education Resource Network (CERN)	1	1	1	1	4	2	5	5	5
Massachusetts Executive Office of Consumer Affairs	1	1	1	1	5	1	1	1	1
Middlesex County Extension Service	1	1	1	1	1	1	5	2	1

*Survey respondents were asked to rate each activities on a five-point scale, with "1" as the most important one, and "5" as the least important.

delivery and consumer education. The other activities (information interpretation and advice, advocacy, lobbying, and problem-solving) reflected the most variation and demonstrated the least consensus.

Will the networks view information interpretation/advice and problem-solving as crucial areas for libraries to develop their consumer information services?

As already noted, on the whole, information interpretation and advice was not viewed as a high priority. Those interviewed also could not reach a consensus concerning the importance of problem-solving. Obviously neither activity is uniformly viewed as priority items for library networks to be engaged in.

RELATIVE IMPORTANCE OF CRITERIA IN PROVIDING INFORMATION

Will the networks be in agreement concerning the relative importance of the five criteria?

Table 5 depicts the response of each network interviewed. The network staff interviewed could not all agree about which of the five criteria (accuracy of the answer, understandibility of the answer, up-to-dateness of the information, the time it took, and the cost in terms of money) was the most important. Those interviewed from the non-library networks, however, agreed that accuracy of the answer was the most important. Except for CERN, the non-library networks also agreed that up-to-dateness and understandability were important criteria. The staff interviewed disagreed concerning the importance of the cost in time and money. The Better Business Bureau of Western Massachusetts and the Massachusetts Executive Office of Consumer Affairs rated these two criteria much higher than did the Middlesex County Extension Service and CERN.

As a generalization, staff members from the five library networks also rated accuracy as the highest priority, followed by up-to-dateness of the information and understandibility of the answer. The Nassau Library System and the Free Library of Philadelphia rated both time and cost as high priorities, while the other librarians viewed these criteria as less important.

PUBLICITY AND MARKETING

Will the networks exploit a variety of publicity techniques?

The consumer programs are highly visible and are subject to some creative methods of publicity. Publicity was frequently viewed in the context of marketing strategies appropriate to the services provided. Networks such as CERN and the Regional Energy/Environment Center more or less adhere to the basic steps of a marketing program outlined by Philip Kotler in his Marketing

Table 5. The Importance of the Five Factors to Individual Networks*

Network Name	Up-to-dateness of Information	Accuracy of Answer	Understandability of Answer	The Time It Took	Cost in Money
Community Health Information Network (CHIN)	2	2	1	5	5
- Watertown Free Public Library	2	1	2	4	5
The Free Library of Philadelphia	1	1	1	1	1
The Nassau Library System	1	1	1	1	1
OCLC/CHANNEL 2000	3	3	3	3	3
- The Public Library of Columbus & Franklin County (PLCFC)	1	1	1	1	1
The Regional Energy/Environment Center, Denver Public Library	1	1	1	5	5
- State Energy Extension Service	1	1	2	1	5
Better Business Bureau of Western Massachusetts	1	1	1	2	2
Consumer Education Resource Network (CERN)	2	1	2	4	5
Massachusetts Executive Office of Consumer Affairs	1	1	1	1	1
Middlesex County Extension Service	1	1	1	5	5

*Those surveyed were asked to rank the factors according to their perceived importance on a five-point scale, with "1" as the most important one and "5" as the least important.

for Nonprofit Organization: (6)

- conceptualizing the market
- analyzing the market
- determining the market programs
- administering the marketing programs

Information relevant to marketing can be gathered from an analysis of the information environment. Paraphrasing Kotler and various on-site interview reports included in Part II, such a review should address questions such as:

- Network Market

  - Who are the network's major markets and public?
  - What are the major market segments in each market?

- Network Clientele

  - How do the clientele feel about the network?
  - What are the information seeking patterns of end users?
  - What are the present and potential information needs that the clientele believe that the network can satisfy?

- Competition

  - What are the other information providers, institutional and other, that compete for the network market?
  - How successful are these competitors in satisfying information needs of the present and potential network users?

- Macroenvironment

  - How have the network information services and programs been influenced or affected by social, economic, technological, governmental, and cultural developments?

After conceptualizing library markets, networks should analyze the market, as CERN has done. Such an analysis involves the identification of network marketing problem, as we as an analysis of the network structure and network consumer. In all these areas, it can be helpful to conduct a needs assessment study.

DETERMINATION OF USER SATISFACTION

Will the networks have undertaken a needs assessment and have gathered data in user satisfaction?

The networks have found generally to have not undertaken a needs assessment. However, if they have completed one, it was

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[6] Philip Kotler, Marketing for Nonprofit Organizations. Englewood Cliff, NJ: Prentice-Hall, 1975. Also the 1981 edition.

usually as a part of Federal grant requirements and occurred early in the history of the network. Typically, there were no regular, on-going efforts to update and compare study findings. The networks interviewed, however, often gather and analyze statistics on users of their services; copies of their data gathering forms are reprinted in several on-site reports in Part II. For example, both CERN and the Better Business Bureau of Western Massachusetts regularly survey users of their services, while the Regional Energy/Environment Center gathers statistics on their users.

Will the networks be in agreement concerning the methods for determining user satisfaction?

Networks rely on both formal and informal methods. Formal methods focus on a mail survey of clientele once a specific information need had been resolved (e.g.,the Better Business Bureau of Western Massachusetts and CERN) or the completion of a questionnaire given to clientele once they were ready to leave the network facilities (e.g., the Regional Energy/Environment Center). Informal methods include unsolicited written letters of praise and oral expressions of appreciation. In the case of the Massachusetts Executive Office of Consumer Affairs, user satisfaction and the success of the service are measured also by the amount of money saved the user of the service. On the whole, the networks seemed to be in agreement that an important method for determining user satisfaction is to monitor the number of repeat users and ask first time users how they became aware of the network and its consumer services. Such a procedure enables network staff to gain an impression of how extensively the satisfied clientele publicize network services by word-of-mouth.

CONCLUSION

This project does not permit us to develop a precise statistical model to measure accurately the effectiveness of library networks' capabilitity to deliver consumer information. It is clear, however, that we have been able to identify the key components of an assessment model. These factors should be taken into servious consideration when developing library networks' consumer information services.